

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,713	06/01/2001	Yasuhiro Kawaguchi	ADACHI P214US	4248

20210 7590 06/25/2003

DAVIS & BUJOLD, P.L.L.C.
FOURTH FLOOR
500 N. COMMERCIAL STREET
MANCHESTER, NH 03101-1151

EXAMINER

YOON, TAE H

ART UNIT	PAPER NUMBER
----------	--------------

1714

DATE MAILED: 06/25/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/832,713	Kawaguchi
Examiner	T. Yoon	Group Art Unit
		1714

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- Responsive to communication(s) filed on _____.
- This action is FINAL.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1:1; 453 O.G. 213.

Disposition of Claims

- Claim(s) 1-9 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- Claim(s) _____ is/are allowed.
- Claim(s) 1-9 is/are rejected.
- Claim(s) _____ is/are objected to.
- Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- The proposed drawing correction, filed on _____ is approved disapproved.
- The drawing(s) filed on _____ is/are objected to by the Examiner
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

All Some* None of the:

Certified copies of the priority documents have been received.

Certified copies of the priority documents have been received in Application No. _____.

Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

<input checked="" type="checkbox"/> Information Disclosure Statement(s), PTO-1449, Paper No(s). <u>3</u>	<input type="checkbox"/> Interview Summary, PTO-413
<input checked="" type="checkbox"/> Notice of Reference(s) Cited, PTO-892	<input type="checkbox"/> Notice of Informal Patent Application, PTO-152
<input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review, PTO-948	<input type="checkbox"/> Other _____

Office Action Summary

Art Unit: 1714

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification (page 8) and claims recite that the claimed material such as EPDM has a melting point in the range of 30-70°C. However, said EPDM is an elastomer (or rubber) which has a glass transition (Tg), not a melting point (Tm) and applicant failed to teach adequately how to measure a Tm for an elastomer.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited molecular weight in claims 3 and 6 is indefinite in not specifying whether it is a number average or weight average molecular weight since said molecular weight are different from each other based on the polydispersity.

Art Unit: 1714

Regarding claim 4, the phrase "rubber- like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) 1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a); or

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1714

Claims 1, 2, 4, 5, 7 and 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chang et al (US 5,177,143).

Chang et al teach a crosslinked rubber having a plasticizer and a thermally conductive filler in example 1 (carbon black) and example 10 (zinc oxide). Said examples show viscosity changes at different temperatures. EPDM (claim 1) and other thermally conductive fillers (col. 7, lines 50-54) are also taught. The recited plasticization at 30-65°C and 60°C is an inherent property of the composition taught by Chang et al. Thus, the invention lacks novelty.

Claims 1, 2, 4, 5, 7 and 9 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mercer et al (US 5,929,138).

Merger et al teach highly conformable alumina filled thermally conductive composition in examples. Example 3 shows the use of EPDM. The recited plasticization at 30-65°C and 60°C is an inherent property of the composition taught by Mercer et al. Thus, the invention lacks novelty.

Claims 1, 2, 4, 5, 7 and 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mercer et al (US 5,849,824).

Merger et al teach thermally conductive compositions in abstract and examples on cols. 16-17 wherein the use of EPDM is seen. Various thermally conductive fillers are taught at col. 6, lines 7-54 and in claim 10. The recited plasticization at 30-65°C and 60°C is an inherent property of the composition taught by Mercer et al. Thus, the invention lacks novelty.

Art Unit: 1714

Claims 1-5 and 7-9 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nguyen (US 6,451,422).

Nguyen teaches thermally conductive compositions in abstract, figure 1 and table 1, and at col. Lines 35-40. The compositions of Nguyen inherently possess the instant viscosity of claim 3 and aluminum is an inherent electromagnetic absorbing filler. Choosing a composition having a phase change temperature such as 60°C from the disclosed 45 and 90°C is an anticipation, or at least obviousness. Thus, the invention lacks novelty.

Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as obvious over Nguyen (US 6,451,422) and Kanda et al (US 4,508,640).

Kanda et al teach that aluminum increase the electromagnetic wave-shielding performance at col. 15, lines 51-56 which supports the examiner's position in above.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as obvious over Nguyen (US 6,451,422) and Mercer et al (US 5,849,824).

The instant invention further recites molecular weight of EPDM. However, Nguyen teaches EPDM at col. 2, lines 19-20, and the use of EPDM having the instant molecular weight in thermally conductive compositions is well known as taught by Mercer et al, col. 3, lines 49-61.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize EPDM having the instant molecular weight in Nguyen with teaching of Mercer

Art Unit: 1714

et al since the use of such EPDM in thermally conductive compositions is a routine practice in the art.

Claims 1-5 and 7 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Duvall et al (US 6,391,442).

Duvall et al teach thermally conductive compositions in abstract and claims. Table on col. 14 shows various T_m, and various polymers such as ethylene containing rubber are taught at col. 6, lines 1-11 and col. 8, lines 5-6. Thus, the invention lacks novelty.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Monday to Thursday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



THY/June 23, 2003

TAE H. YOON
PRIMARY EXAMINER